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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,541	06/19/2001	John A. Sollars JR.	2056A	3491

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EXAMINER
ENGLISH, PETER C

ART UNIT	PAPER NUMBER
3616	6

DATE MAILED: 04/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/884,541	Sollars, Jr.
Examiner	**Art Unit**
Peter English	3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Feb 21, 2002*.

2a) ☒ This action is **FINAL.** 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-40* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☒ The proposed drawing correction filed on *Feb 21, 2002* is: a) ☒ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☐ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
18) ☐ Interview Summary (PTO-413) Paper No(s). _____
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other:

DETAILED ACTION

Drawings

1. The proposed drawing correction filed on February 21, 2002 has been approved.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). The specification fails to state that:

the flow barriers form peninsulas (claims 17 and 18; claim 34, line 10; claims 35 and 36)

the flow barriers are T-shaped (claim 21);

the woven in joints form an inflatable portion having more than four interior sides (claim 32, lines 12-13; claim 40, lines 10-11); or

the woven in joints form an inflatable portion having at least six sides (claim 33).

Correction is required.

3. The specification is objected to because the brief description of Fig. 3A (page 7, lines 4-6) is confusing since it appears to state that the figure shows two different airbag cushions. The examiner suggests that the brief description of Fig. 3A be amended to read as follows: "FIG. 3A illustrates a possible layout 200 for on loom production of the inflatable restraint cushion 110 shown in FIG. 2." See page 11, lines 7-9. Appropriate correction is required.

4. The specification is objected to because: at line 2 of the new paragraph added at page 11, line 13, "face portion and the rear portion" should be "top and bottom layers of fabric". See page 10, line 23-page 11, line 1; page 11, line 19; and page 12, lines 11-12. Appropriate correction is required.

Claim Objections

5. Claims 21 and 34-39 are objected to because of the following informalities:

in claim 21, at line 1, "is the" should be "is in the";

in claim 34, at line 10, "woven-in" should be "woven in";

in claim 35, at line 1, "woven-in" should be "woven in";

in claim 36, at lines 1 and 2, "woven-in" should be "woven in";

in claim 37, at line 10, "woven-in" should be "woven in"; and

in claim 39, at line 2, "woven-in" should be "woven in".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. Claims 11, 12, 16-31, 36 and 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 11, at line 1, the term "said internal flow barriers" lacks proper antecedent basis. The examiner suggests: at line 1, change "said internal flow barriers comprise" to "said at least one internal flow barrier comprises".

In claims 16, 17, 19, 21 and 22, at line 1, the term "said internal flow barriers" lacks proper antecedent basis. The examiner suggests: in claims 16, 17, 19, 21 and 22, at line 1, change "at least one of said internal flow barriers" to "said at least one internal flow barrier".

In claims 18 and 20, at line 1, the term "said internal flow barriers" lacks proper antecedent basis. The examiner suggests: in claim 18, at line 1, change "a plurality of said internal flow barriers form" to "said at least one internal flow barrier comprises a plurality of"; and in claim 20, at line 1, change "a plurality of said internal flow barriers form respective" to "said at least one internal flow barrier comprises a plurality of".

In claim 23, at line 10, the phrase "at least a portion of said flow barriers" renders the claim indefinite because it is unclear what constitutes a "portion" of a plurality of flow barriers. Does this mean a "portion" of each of the barriers? Or does it refer to some, but not all, of the barriers? The examiner suggests: at line 10, change "a portion" to "one".

In claim 30, at lines 1-2, the reference to "an area of two layers of fabric" renders the claim indefinite because it is unclear what the relationship is between the "two layers of fabric" in claim 30 and the "first fabric layer" and "second fabric layer" in claim 23 (line 2). Is claim 30 introducing two new fabric layers, or are these the same fabric layers as those in claim 23? The examiner suggests: at line 1, change "two" to "said first and second".

In claim 36, at lines 1-2, the term "said woven-in joints forming said peninsula" lacks proper antecedent basis. Note that claim 34 states that "at least one" woven in joint forms a peninsula.

In claim 38, at line 1, the term "said islands" lacks proper antecedent basis. Note that claim 36 recites "an island".

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-4, 6-13, 15-26 and 28-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haland et al. (GB 2,297,950) in view of Buchner et al. (US 3,792,873) and Thornton et al. (US 5,098,125).

Haland et al. discloses an air bag cushion comprising a woven fabric bag having a face portion formed by a first fabric layer, a rear portion formed by a second fabric layer, and woven in joints which define flow barriers between the first and second layers. The fabric layers are interwoven to form the woven in joints. See Figs. 1 and 6-8, and page 6, lines 4-15. As shown in Figs. 7 and 8, the fabric layers are not connected to one another between the joints. Because the woven in joints have both a longitudinal dimension and a lateral dimension (see Figs. 1 and 6-8), they are considered to extend in both the warp direction and the weft direction. As shown in Figs. 1 and 6, the woven in joints consist "essentially" of straight line segments. As shown in Fig. 6, the woven in joints within the interior of the cushion extend from the bottom edge of the cushion to a position adjacent to but spaced from the top edge of the cushion (i.e., they form "peninsulas") so that inflation fluid from an inflator 51 can flow to all of the chambers defined by the woven in joints. As also shown in Fig. 6, woven in joints located along the top and bottom of the cushion form closed edges of the cushion. Fig. 2 shows an embodiment in which the woven in joints form "islands". The woven in joints are considered to be "box structures" and "multiple cornered", as is broadly claimed, since these terms are not defined in the claims.

Haland et al. lacks fabric layers made of polyester or nylon yarns, and woven in joints separated by at least two yarns and no more than eight yarns. As shown in Fig. 3, Buchner et al. teaches an air bag cushion comprising a woven fabric bag 1 having a face portion formed by a first fabric layer 5a, a rear portion formed by a second fabric layer 5b, and woven in joints 6 which define flow barriers between the first and second layers 5a, 5b. As shown in Fig. 4, the first fabric layer 5a is defined by warp yarns 21 and weft yarns 24, and the second fabric layer 5b is defined by warp yarns 22 and weft yarns 25. The fabric layers 5a, 5b are interwoven to form the woven in joints 6 (see column 3, lines 36-55 and column 4, line 65 through column 5, line 14). As shown in Fig. 4, the woven in joints are separated by eight yarns. The fabric layers 5a, 5b are made of polyester or nylon (see column 5, lines 15-17). Thornton et al. also teaches an air bag cushion having interwoven fabric layers made of polyester or nylon yarn (see column 3, lines 49-50). The

fabric layers are interwoven in such a way as to eliminate yarn floats (see column 4, lines 48-68). The cushion is woven on an "electronic or computer-controlled dobby or harness regulator" (see column 5, lines 9-12).

From these teachings of Buchner et al. and Thornton et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Haland et al. by: forming the fabric layers of polyester or nylon yarns because these materials provide the cushion with the required strength and durability; and by separating the woven in joints by at least two yarns and no more than eight yarns in order to provide the inflatable areas between the joints with a sufficient volume to protect an occupant, while minimizing the likelihood of joint failure.

With respect to claims 7 and 29, it would have been obvious to reduce the separation of the joints to no more than four yarns in order to reduce the size of the inflatable areas between the joints. Further, such a modification involving a mere change in size is generally recognized as being within the level of ordinary skill in the art.

With respect to claims 9, 15 and 31, it would have been obvious to provide the airbag cushion with a rectangular shape in order to adapt the bag for use in a particular environment. Further, such a modification involving a mere change in shape is generally recognized as being within the level of ordinary skill in the art.

With respect to claims 21 and 22, it would have been an obvious matter of design choice to provide the woven in joints with an alternate shape in order to give the cushion a specific inflated shape. Further, such a modification involving a mere change in shape is generally recognized as being within the level of ordinary skill in the art.

9. Claims 5, 14 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haland et al. in view of Buchner et al. and Thornton et al. as applied to claim 1 above, and further in view of Kitamura (US 5,336,538).

The Haland et al., Buchner et al. and Thornton et al. combination lacks a porosity blocking coating on the cushion. Kitamura teaches a woven fabric cushion 1 including a porosity blocking coating 2 (see column 4, lines 48-51). From this teaching of Kitamura, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Haland et al. by providing the cushion with a porosity blocking coating in order to prevent the cushion from deflating too rapidly when struck by a vehicle occupant. Further, such a coating can be used to prevent hot gases from exiting portions of the cushion which contact the occupant.

Response to Arguments

10. Applicant's arguments filed on February 21, 2002 have been fully considered but they are not persuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter English whose telephone number is (703) 308-1377. The examiner can normally be reached on Monday-Thursday from 7:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson, can be reached on (703) 308-2089.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1113.

Any response to this action should be mailed to:

Box AF
Commissioner for Patents
Washington, DC 20231

or faxed to:

(703) 872-9327 (for informal or draft communications, please clearly label "PROPOSED" or "DRAFT")

Hand delivered responses should be brought to the Group receptionist on the 7th Floor of Crystal Park 5, 2451 Crystal Drive, Arlington, Virginia.

3/28/02

PETER C. ENGLISH
PRIMARY EXAMINER

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March 28, 2002